

well as in B.M.A. House. If prompt and effective action is not forthcoming the medical services of the central and local authorities will go where the school dental service has already gone—down the drain. The economic pressure is just as great on the doctor as on the dentist, but the opportunity to transfer from prevention to cure less easy to find.

If the local-authority medical services go the way of their dental counterparts there will be the immediate risk of the return of diphtheria on a substantial scale and also of the reappearance of the other epidemic diseases. As a parting shot I want to ask if any of my general-practitioner friends want to have to cope with an outbreak of smallpox without the help of their local health department.—I am, etc.,

Elgin, Moray.

I. C. MONRO.

SIR,—How very refreshing to read of Professor R. H. Parry's frankness on proposing the toast of the guests at the Society of Medical Officers of Health Annual Dinner (*Journal*, December 3, p. 1289). Most of us in the public health service are getting just a little tired of the soft soap and treacle regularly handed out to us by every non-medical functionary in the land from the Minister downwards. Everyone loves us, everyone says we are doing a grand job, everyone is awfully sorry for us—and no one does a thing about our status except, of course, talk about it endlessly.

Week after week we read of practitioners struggling for increased remuneration. Good luck to them. But is it really realized that any practitioner the day after he qualifies is a better financial prospect than the medical officer of health who has a specialist diploma and years of experience behind him before he gets his post as M.O.H. with its attendant pittance?

Why have not the associations of local authorities the boldness to come out into the open and say what is pretty obvious anyway—that they don't want a public health service? Then we could all clear out and let it collapse as ignominiously as the school dental service has done, and the rest of the profession could busy itself in trying to patch up ills which would never occur if preventive medicine offered even reasonable inducements and a living wage for anyone but visionaries and lunatics.

Is it not a little ironical that the very body of medical men who started a public health service in this country should be the only ones to be disregarded when the National Health Service Act came into being? Let us have the answer one way or the other, and soon. We don't ask very much—only to be equated financially with other medical men of comparable experience.—I am, etc.,

Wallingford, Berkshire.

HECTOR MACKENZIE-WINTLE.

Dangers of Dicoumarol

SIR,—The new coumarin substance, B.O.E.A., described by Drs. Catherine C. Burt, Helen Payling Wright, and Mirko Kubik (December 3, p. 1250), is clearly a more quickly acting and in some ways a safer anticoagulant than dicoumarol. In view of this article and of the leading article entitled "Dangers of Dicoumarol" (p. 1279), I think three important questions need answer. What is the most effective and safest prothrombin level to aim at? How often is it necessary to estimate the prothrombin level? How dangerous are these anticoagulants?

In the article by Dr. Burt and her colleagues a prothrombin level between 20 and 30% was aimed at because it was thought "generally desirable," but in some cases a level of 40 to 50% of normal "proved satisfactory for clinical improvement." A number of workers¹⁻⁴ have all aimed at a prothrombin level of 10 to 20% of normal in the treatment of thromboses. Peters and his colleagues⁵ produced a level of 35 to 50% in their cases and recorded good results. Scott and Lissimore⁶ described a case of lymphatic leukaemia with multiple mesenteric thromboses which ceased when the prothrombin level was kept between 60 and 70% of normal by dicoumarol. Treatment was maintained for over three years, prothrombin estimations being made at monthly intervals.

During the last four years I have treated 81 cases of thrombosis by maintaining a prothrombin level of 65 to 75% of normal, and the results have been as good as any of those

recorded by the authors quoted above for similar cases. No haemorrhage has been observed. These authors have all recommended daily estimations of prothrombin level, and as their patients were constantly in close proximity to haemorrhage this was certainly essential. On the other hand, when one aims at a level of 65 to 75% of normal, dosage can be adjusted to produce this level and maintain it, using the prothrombin estimation to confirm one's aim rather than as an essential in treatment. Estimations in these cases were never done more often than every five days; in prolonged treatment estimations were done once a month. The prothrombin level never fell below 50% and never rose above 80%. In 24 cases treatment has been continued for at least six months of the year for one to four years.

These cases have all been treated at home, but no case in which liver or renal damage has been found or suspected was given dicoumarol without more frequent prothrombin estimations. Shapiro and his colleagues⁷ showed how liver damage increased the response to dicoumarol. Richards and Steggerda⁸ demonstrated the continued effect of dicoumarol in rats from which the kidneys had been removed; normally the prothrombin level soon falls.

Dr. Catherine Burt and her co-workers also report that no gross cumulative effect of B.O.E.A. has been observed. Bingham and his colleagues⁹ found the same with regard to dicoumarol. After taking 10 g. of dicoumarol in 92 days, a man with thromboangiitis obliterans had normal liver and renal function. My patients who took dicoumarol for six months during each of four successive years similarly showed no ill effect, their white and red cells remaining normal.

It is suggested, therefore, that a prothrombin level of 60 to 75% of normal is adequate for the treatment of most cases of thrombosis; that prothrombin estimations in these circumstances are unnecessary more often than every five days in most cases; that dicoumarol and also B.O.E.A. given for a prolonged time are not harmful in correct dosage.—I am, etc.,

Leeds.

R. A. MURRAY SCOTT.

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Enteritis Due to Duck Eggs

SIR,—The article by Professor L. P. Garrod and Dr. M. B. McIlroy on enteritis due to duck eggs (December 3, p. 1259) raises certain problems of prevention. Is there any conclusive evidence that a duck infected with *Salm. typhi-murium* ever transmits infection to the inside of a freshly laid and undamaged egg?

In the article in question the words, "In hens' eggs contamination is confined to the outer surface of the shell," suggest that this may also be the path of infection in duck eggs, facilitated in the case of duck eggs by the greater porosity of the shell and by the conditions under which a duck may lay its egg. Unlike a hen, a duck as often as not does not lay its egg in a nest but anywhere about the farm. In addition, a duck's droppings are almost invariably liquid, and this liquid faecal matter gets trampled over the egg.

Even under these conditions it is highly improbable that the egg will become infected unless it is left lying out for a matter of days, and it is on dirty farms that this is likely to occur. It is these "found" eggs which may have been lying out for an indefinite period which are probably the cause of human infection.

An egg, be it duck or hen, which has been lying in one position for some days tends to become sided-yolked, and when, as happens to all eggs at packing stations, these eggs are lamped and found to be sided-yolked they should be discarded, although this would entail discarding some fresh eggs.

It should also be borne in mind that most cracked, broken, and stained eggs are, at packing stations, turned into what are known as "liquid eggs" and sent to bakeries and caterers.